



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

**NOTICE OF ALLOWANCE AND ISSUE FEE DUE**

LMS1/0304

JOHN LAND  
FISH AND RICHARDSON  
4225 EXECUTIVE SQUARE  
SUITE 1400  
LA JOLLA CA 92037

APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
08/862,192	05/23/97	021	DOWNS, R	2762 03/04/99
First Named Applicant	SKOLNICK, 35 USC 154(b) term ext. = 0 Days.			

TITLE OF INVENTION: PREDICTION OF RELATIVE BINDING MOTIFS OF BIOLOGICALLY ACTIVE PEPTIDES AND PEPTIDE MIMETICS

ATTORNEY DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
07300/034001	706-021.000	P91	UTILITY	NO	\$1210.00	06/04/99

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.**

**THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.**

**HOW TO RESPOND TO THIS NOTICE:**

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
- B. If the status is the same, pay the FEE DUE shown above.

If the SMALL ENTITY is shown as NO:

- A. Pay FEE DUE shown above, or
- B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give application number and batch number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

**PATENT AND TRADEMARK OFFICE COPY**



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, DC 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/862,192	05/23/97	SKOLNICK	J 07300/034001

LM61/0304

JOHN LAND  
FISH AND RICHARDSON  
4225 EXECUTIVE SQUARE  
SUITE 1400  
LA JOLLA CA 92037

EXAMINER

DOWNS, R

ART UNIT

PAPER NUMBER

2762

DATE MAILED:

03/04/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

## Notice of Allowability

Application No.  
**08/862,192**

Applicant(s)  
**SKOLNICK ET AL.**

Examiner  
**Robert W. Downs**

Group Art Unit  
**2762**



All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course.

☒ This communication is responsive to Amendment filed 12/21/98.

☒ The allowed claim(s) is/are 1-21.

☐ The drawings filed on \_\_\_\_\_ are acceptable.

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE **THREE MONTHS** FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.

☒ Applicant MUST submit NEW FORMAL DRAWINGS

☐ because the originally filed drawings were declared by applicant to be informal.

☒ Including changes required by the Notice of Draftsperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. 5.

☐ Including changes required by the proposed drawing correction filed on \_\_\_\_\_, which has been approved by the examiner.

☐ Including changes required by the attached Examiner's Amendment/Comment.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

### Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

☐ Interview Summary, PTO-413

☐ Examiner's Amendment/Comment

☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

☒ Examiner's Statement of Reasons for Allowance

Art Unit:

### REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance: Use of the backpropagation algorithm with medical data as in the present invention would not have been obvious to one of ordinary skill in the art over the admitted prior art stated in the specification. The backpropagation algorithm, as admitted in the specification on pages 5 and 6, was a known approach to pattern classification. Page display analysis has been used to identify MHC class II molecule binding peptides (specification, page 6: reference to data obtained from Dr. D.P. Smith). Page display libraries were known (specification, page 6, statement in last paragraph). However, the analysis for identifying class II molecule binding peptides did not determine relative binding affinities of the molecules; thus there is no motivation to predict relative binding affinities of peptide molecules. Furthermore, the data used for training the neural network to predict relative binding affinities of molecules were not previously known but were obtained by analysis for purposes of the invention (specification, page 6, last paragraph).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit:

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Downs whose telephone number is (703) 305-9642.

RWD  
March 1, 1999

*Robert W. Downs*

**ROBERT W. DOWNS  
PRIMARY EXAMINER**

26250-26729880